

U.S. Patent Application Serial No. 09/980,329
Applicant: Talish, et al.
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AMENDMENTS TO THE CLAIMS

A single version of all claims that are, or were, in the application, are marked up to show all the changes relative to the previous version of the claims, is now set forth, with deleted text shown by ~~striketrough~~ and added text shown by underlining:

1. (Currently Amended) A method for accelerating a healing process for an injury using ultrasound, the method comprising ~~the steps of~~

introducing a capsule comprising a piezoelectric sensor and an ultrasound contrast agent into a patient, wherein the ultrasound contrast agent is adapted to accelerate a healing process for an injury upon application of ultrasound;

| mounting ~~the~~ an ultrasonic source to the patient;

transmitting an acoustic signal to the piezoelectric sensor instructing the capsule to release a portion of the ultrasound contrast agent, wherein the release of the ultrasound contrast agent is specifically targeted to the proximity of the injury; and

impinging ultrasonic waves in proximity to the injury, wherein the ultrasound contrast agent facilitates in lowering the cavitation threshold to an intensity level attainable by the ultrasonic waves.
2. (Currently Amended) The method according to Claim 1, further comprising ~~the step of~~ maintaining the acoustic spatial average-temporal average (SATA) intensity of the ultrasonic waves from about 5 to 500 mW/cm².
3. (Original) The method according to Claim 1, wherein the ultrasound contrast agent is comprised of microbubbles having a radius from 0.1 to 10.0 um.

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4. (Currently Amended) The method according to Claim 3, further comprising ~~the step of~~ maintaining the resonance bubble frequency of the microbubbles from 0.5 MHz to 10 MHz.

5. (Currently Amended) The method according to Claim 1, further comprising ~~the step of~~ maintaining the acoustic transmit frequency of the ultrasonic waves from 10 kHz to 10 MHz.

6. (Currently Amended) The method according to Claim 1, further comprising ~~the step of~~ terminating the impinging step after approximately thirty minutes.

7. (Currently Amended) The method according to Claim 1, wherein the ~~step of~~ introducing comprises ~~the step of~~ time-releasing the ultrasound contrast agent into the patient.

8. (Currently Amended) The method according to Claim 1, wherein the ~~step of~~ introducing comprises ~~the step of~~ using the syringe to intraveneously introduce the ultrasound contrast agent into the patient.

9. (Currently Amended) The method according to Claim 1, wherein the step of introducing a capsule further comprises the steps of: using a capsule that is timed-release,

~~placing the ultrasound contrast agent within a timed release capsule; and~~

~~placing the timed release capsule within the patient.~~

10-19 (Cancelled).

20. (Previously Presented) A method for accelerating a healing process for an injury upon application of ultrasound, the method comprising the steps of:

providing a main operating unit having an internal power source coupled to an ultrasonic transducer assembly, the ultrasonic transducer assembly includes at least one ultrasonic

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transducer, an ultrasonic signal generator and signal generator circuitry therein, wherein the ultrasonic transducer assembly is adapted to be mounted to a patient's body;

providing a placement module configured for receiving the ultrasonic transducer assembly and for placing the at least one ultrasonic transducer in proximity to the injury;

providing a syringe capable of introducing a capsule comprising a piezoelectric sensor and an ultrasound contrast agent into the patient;

introducing via the syringe a capsule comprising a piezoelectric sensor and an ultrasound contrast agent into the patient, wherein the ultrasound contrast agent is adapted to accelerate a healing process for an injury upon application of ultrasound, and the piezoelectric sensor is capable of receiving an acoustic signal to release at least some of the ultrasound contrast agent inside the patient;

transmitting an acoustic signal to the piezoelectric sensor instructing the capsule to release a portion of the ultrasound contrast agent in proximity to the injury; and

exciting the at least one ultrasonic transducer to impinge ultrasonic waves at or near the injury, wherein the ultrasound contrast agent facilitates in lowering the cavitation threshold to an intensity level attainable by the ultrasonic waves.

21. (Original) The method according to Claim 3, wherein the radii of the microbubbles of the ultrasound contrast agent are less than 7.0 μm .

22. (Previously Presented) The method according to Claim 10 ~~1~~, wherein the step of transmitting a signal to the piezoelectric sensor comprises instructing the capsule to release the ultrasound contrast agent in preset amounts at multiple predetermined time intervals.

23-24. (Cancelled)

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